

IN THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis. Claims 5, 11 and 17 have been canceled without prejudice to, or disclaimer of, their subject matter. The subject matter of these claims has been placed into claims 1, 7 and 13, respectively.

LISTING OF CLAIMS

1. (Currently Amended) A method for coordinating transmissions of access points in a wireless local area network comprising the steps of:

estimating a number of slots for each access point associated with a contention free period (CFP);

generating estimated slot sequences, slot assignments and a transmission frequency for each access point based on the estimated number of slots and an interference graph associated with every access point;

determining a total number of slots used in the estimated slot assignments;

comparing the total number of slots to an available number of slots;

adjusting a slot-to-user ratio of each access point ~~if the total number of slots does not equal the available number of slots~~ until said ratios substantially equal a maximum, lower bound of all of the slot-to-user ratios; and

assigning each access point a number of slots and a slot sequence based on the estimated slot assignments and slot sequences and assigning each access point a transmission frequency when the total number of slots equals the available number of slots.

2. (Original) The method as in claim 1 wherein the adjustment step further comprises the steps of:

increasing the slot-to-user ratio of each access point when the total number of slots is less than the available number of slots; and

decreasing the slot-to-user ratio of each access point when the total number of slots is greater than the available number of slots.

3. (Original) The method as in claim 1 further comprising the steps of:

estimating a next number of slots for each access point based on each access point's adjusted slot-to-user ratio; and

generating next, estimated slot sequences, slot assignments and a transmission frequency for each access point based on the next number of slots and the interference graph.

4. (Original) The method as in claim 1 wherein the generation step further comprises generating the estimated slot sequences, slot assignments and frequencies such that no two interfering access points are assigned the same transmission frequency during a given slot and such that a total number of assigned slots is minimized.

5. (Canceled).

6. (Original) The method as in claim 1 wherein the method comprises a 4-approximation technique.

7. (Currently Amended) A system for coordinating transmissions of access points in a wireless local area network operable to:

estimate a number of slots for each access point associated with a contention-free period (CFP);

generate estimated slot sequences, slot assignments and a transmission frequency for each access point based on the estimated number of slots and an interference graph associated with every access point;

determine a total number of slots used in the estimated slot assignments;

compare the total number of slots to an available number of slots;

adjust a slot-to-user ratio of each access point ~~if the total number of slots does not equal the available number of slots~~ until said ratios substantially equal a maximum, lower bound of all of the slot-to-user ratios; and

assign each access point a number of slots and a slot sequence based on the estimated slot assignments and slot sequences and assigning each access point a transmission frequency when the total number of slots equals the available number of slots.

8. (Original) The system as in claim 7 further operable to:

increase the slot-to-user ratio of each access point when the total number of slots is less than the available number of slots; and

decrease the slot-to-user ratio of each access point when the total number of slots is greater than the available number of slots.

9. (Original) The system as in claim 7 further operable to:

estimate a next number of slots for each access point based on each access point's adjusted slot-to-user ratio; and

generate next, estimated slot sequences, slot assignments and a transmission frequency for each access point based on the next number of slots and the interference graph.

10. (Original) The system as in claim 7 further operable to:
generate the estimated slot sequences, slot assignments and frequencies
such that no two interfering access points are assigned the same transmission
frequency during a given slot and such that a total number of assigned slots is
minimized.

11. (Canceled).

12. (Original) The system as in claim 7 wherein the system is
operable to coordinate the transmissions using a 4-approximation technique.

13. (Currently Amended) A system for coordinating transmissions of
access points in a wireless local area network comprising:

means for estimating a number of slots for each access point associated
with a contention free period (CFP);

means for generating estimated slot sequences, slot assignments and a
transmission frequency for each access point based on the estimated number
of slots and an interference graph associated with every access point;

means for determining a total number of slots used in the estimated slot
assignments;

means for comparing the total number of slots to an available number of
slots;

means for adjusting a slot-to-user ratio of each access point ~~if the total
number of slots does not equal the available number of slots~~ until said ratios
substantially equal a maximum, lower bound of all of the slot-to-user ratios;
and

means for assigning each access point a number of slots and a slot
sequence based on the estimated slot assignments and slot sequences and

assigning each access point a transmission frequency when the total number of slots equals the available number of slots.

14. (Original) The system as in claim 13 further comprising:
means for increasing the slot-to-user ratio of each access point when the total number of slots is less than the available number of slots; and
means for decreasing the slot-to-user ratio of each access point when the total number of slots is greater than the available number of slots.

15. (Original) The system as in claim 13 further comprising:
means for estimating a next number of slots for each access point based on each access point's adjusted slot-to-user ratio; and
means for generating next, estimated slot sequences, slot assignments and a transmission frequency for each access point based on the next number of slots and the interference graph.

16. (Original) The system as in claim 13 further comprising:
means for generating the estimated slot sequences, slot assignments and frequencies such that no two interfering access points are assigned the same transmission frequency during a given slot and such that a total number of assigned slots is minimized.

17. (Canceled).